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WILLIAM FREDERICK PURCELL AND THE FLORA OF BERGVLIET

J. P. Rourke, P. Fairall and D. A. Snijman
(Compton Herbarium, Kirstenbosch)

Abstract

W. F. Purcell's herbarium of vascular plants from Bergvliet, Cape Peninsula, is enumerated, the specimens having recently been named and incorporated in the South African Museum Herbarium, Kirstenbosch. Formed between 1915 and 1919 from a lowland/flats site, now destroyed by urbanisation, the 2 513 sheet collection records the presence of 595 indigenous species, i.e. 26,4 % of the Cape Peninsula's flora from 0,7 % of its surface area. A brief biography of Purcell is provided.

Uittreksel

WILLIAM FREDERICK PURCELL EN DIE FLORA VAN BERGVLIET

W. F. Purcell se herbarium van vaarplante vanaf Bergvliet in die Kaapse Skiereiland word genoem nadat die soorte pas benaam en opgeneem is in die Suid-Afrikaanse Museum-herbarium versameling, Kirstenbosch. Saamgestel tussen 1915 en 1919 van 'n laagland/vlakte terrein, nou verlore as gevolg van dorpsuitbreiding, verteenwoordig die 2 513 eksemplare die teenwoordigheid van 595 soorte wat 26,4 % van die Skiereilandse flora uitmaak uit 'n area 0,7 % van die totale oppervlakte. 'n Kort biografie van Purcell word voorsien.

Introduction

During 1977/78, 2 513 mounted herbarium specimens, collected approximately eighty years ago by Dr W. F. Purcell at Bergvliet Farm, Constantia, near Cape Town, were identified, accessioned and incorporated into the general collection of the South African Museum Herbarium at Kirstenbosch. This material documents the former floristic richness of what is today a densely populated part of the Cape Peninsula.

Since the Purcell collection is relatively unknown, we have deemed it desirable to chronicle the history of this material, to provide a brief biography of the collector, a list of the taxa represented in the Bergvliet collection and also a discussion on the collection's significance in making analyses of the Cape Peninsula's flora.

History of the Collection

In 1921, Mrs Anna Purcell, widow of Dr W. F. Purcell, donated her late husband's herbarium to the South African Museum, Cape Town. According to the annual report of the museum for 1921, the herbarium consisted of an

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"admirably mounted set of native plants representing the flora of the Bergvliet estate. The specimens, which have been most carefully dried, are, in most instances, mounted and kept separate from the general collection, occupying four cabinets." (Ann. Rep. of S.A. Museum, 1921 pg. 10).

Unfortunately, the specimens were mostly unidentified. Consequently they remained as a separate collection and were neither loaned to, nor examined by research workers, with the exception of Sydney Garside who studied the Hypoxidaceae sheets. Garside excepted, none of the other contributors to Adamson and Salter's *Flora of the Cape Peninsula* (1950) apparently made any use of this material—a fact which resulted in at least two species' records for the Cape Peninsula being overlooked. (Records of *Galaxia alata* Goldblatt and *Moraea inconspicua* Goldblatt from the Cape Peninsula, are each based on a Purcell specimen and one other collection).

In 1956, the South African Museum Herbarium was transferred to Kirstenbosch and with it came the Purcell collection, still unworked and still in its four original cabinets. As a detailed inventory of the flora peculiar to a lowland/flats site on the Cape Peninsula, it was obvious that Purcell's herbarium constituted the finest existing record.

Accordingly, the present authors (with the assistance of several specialists) undertook the identification of the material and incorporated it in the South African Museum Herbarium. A distinctive ticket was affixed to each sheet indicating its provenance and also providing further data such as the specimen's precise locality on the Bergvliet estate, the date or dates of collection and where known, Purcell's collecting number.

THE SPECIMENS

A remarkable feature of Purcell's herbarium specimens is their completeness and quality of preservation. Root systems were carefully excavated, washed clean and pressed. Fugacious flowers (e.g. Iridaceae) were carefully laid out and populations were sampled to display size ranges within a species. Moreover, it is clear from their exceptionally fine state of preservation that the specimens were killed rapidly, followed by swift dehydration during the drying process. Purcell was especially successful with fleshy material and indeed left a number of manuscript notes on his experiments in drying botanical specimens.

Practically all his botanical collections at Bergvliet were made during a four year period, between 1915 and his death in 1919. Not all these collections bear personal collecting numbers. Collecting numbers up to 525 have been encountered, although his Bergvliet register enumerates collections from 1 to 361, after which he apparently discontinued writing up the register. This register is now preserved in the Compton Herbarium, Kirstenbosch.

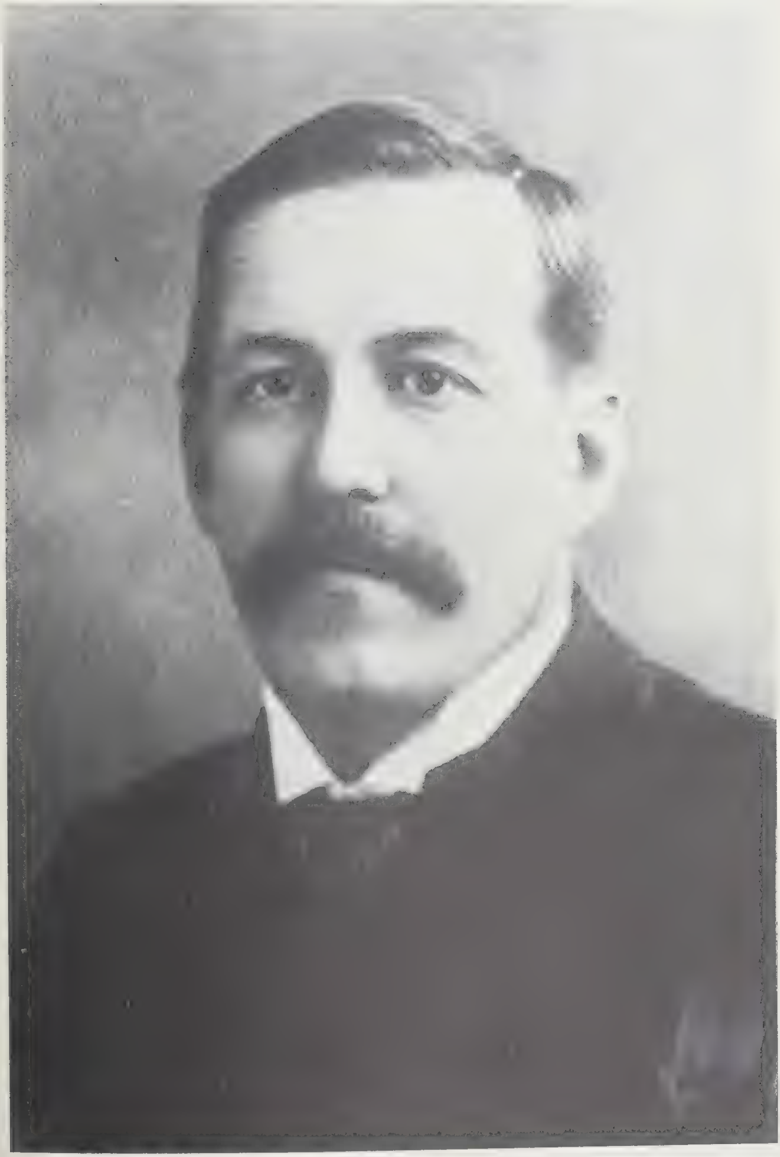


FIG. 1.
William Frederick Purcell

OTHER COLLECTING LOCALITIES

Although practically all Purcell's collecting was confined to Bergvliet Farm, a few hundred sheets from other localities were also incorporated into the general SAM herbarium. This additional material was collected chiefly at The Baths, Caledon, and near Riviera Beach, Hermanus, as well as at a few sites on the Cape Peninsula, such as Hout Bay, but is not further discussed here.

BRIEF BIOGRAPHY

William Frederick Purcell was born in London on the 18th of September 1866. His father, Walter Patrick Joseph Purcell of Waterford, Ireland, had married Sophia Wilhelmina Jonasina Hertzog in Cape Town, during November 1865. Before coming to the Cape, W. P. J. Purcell had originally taken a medical degree and practised as a naval surgeon, although later he decided to pursue a legal career. He was admitted as a barrister of the Inner Temple, London, and in due course joined the Cape Bar, but it is not certain whether he ever practised.

Young William Frederick was brought up in an atmosphere of the best Cape traditions. Through his mother (who was a second cousin to Gen. J. B. M. Hertzog) he was connected to some of the most influential families in the land. Much of his childhood was spent at Bergvliet, the historic home owned by his uncle, W. F. Hertzog. Three aspects of life at Bergvliet were to influence him profoundly. The wild life on the farm led him to take up a career in zoology, while the largely unspoilt natural vegetation was to be a source of boundless interest and pleasure in his retirement.

The old homestead with its library, the collection of furniture inherited from his mother and his friendship with Mrs Marie Koopmans de Wet, stimulated a life-long preoccupation with art and antiques, that culminated in his successful efforts to establish a cultural museum in Mrs Koopmans de Wet's house. (He was one of the executors of Mrs Koopmans de Wet's will).

Purcell's cultural and zoological activities are well documented but his work as a plant collector is scarcely known. This paper attempts to put on record his achievements in this field.

Purcell's scientific career began in 1881 when he entered the South African College, Cape Town. After graduating in 1887, as a Bachelor of Arts (in Mathematics and Natural Philosophy), he proceeded to the Friederick Wilhelm University, Berlin, where he obtained the degree of Doctor of Philosophy in August 1896, his thesis being on 'The structure of the eyes in the Phalangida.'

On returning to the Cape, Purcell joined the South African Museum as first assistant in the Department of Invertebrates. He held this post from 1896 until July 1905, when he resigned due to ill health. Retiring to Bergvliet, he spent the remaining years of his life there, collecting Arachnids and making an herbarium

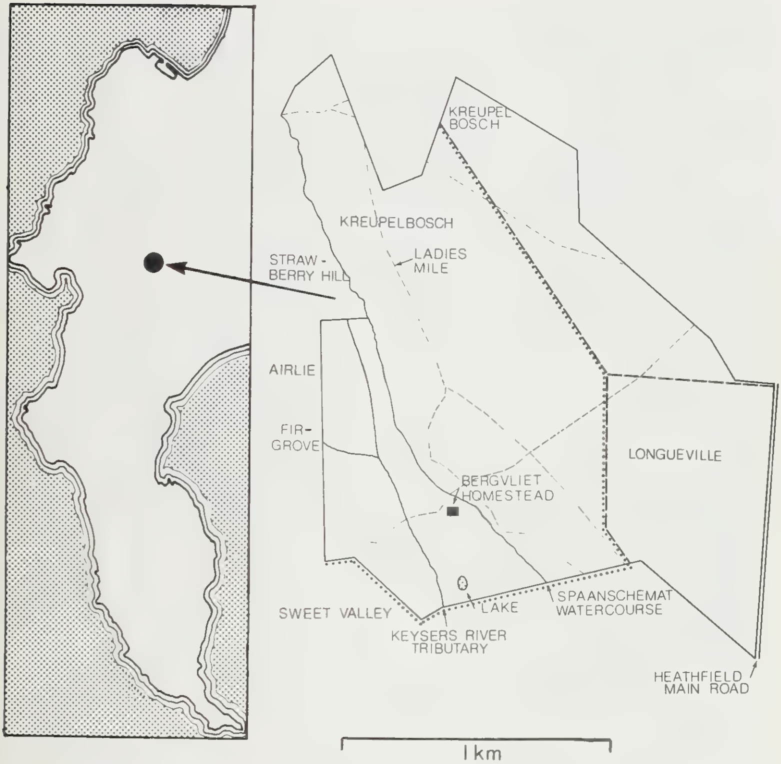


FIG. 2.
Bergvliet estate, showing the perimeter boundaries of the property and its position on the Cape Peninsula.

of the farm's flora. Never a robust man, Purcell had to nurse a delicate constitution. He died at Bergvliet on the 3rd of October 1919, at the early age of 53.

BRIEF HISTORY OF THE ESTATE

To understand the history of Bergvliet and the flora this estate supported, it is necessary to look back to the year 1685, when Governor Simon van der Stel was granted a farm and grazing rights in an area south-west of Table Mountain; a farm which he subsequently called Constantia. Van der Stel died in 1712 but four years later, in August 1716, the executors of his estate divided the property into two portions, Constantia and Bergvliet. Thus Bergvliet came into existence

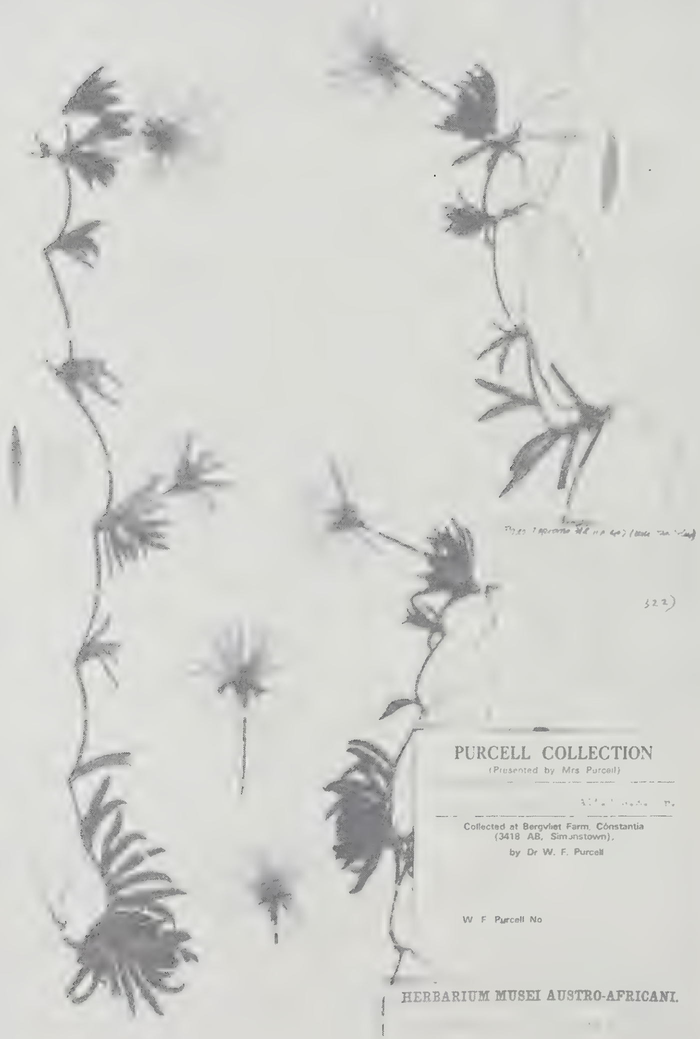
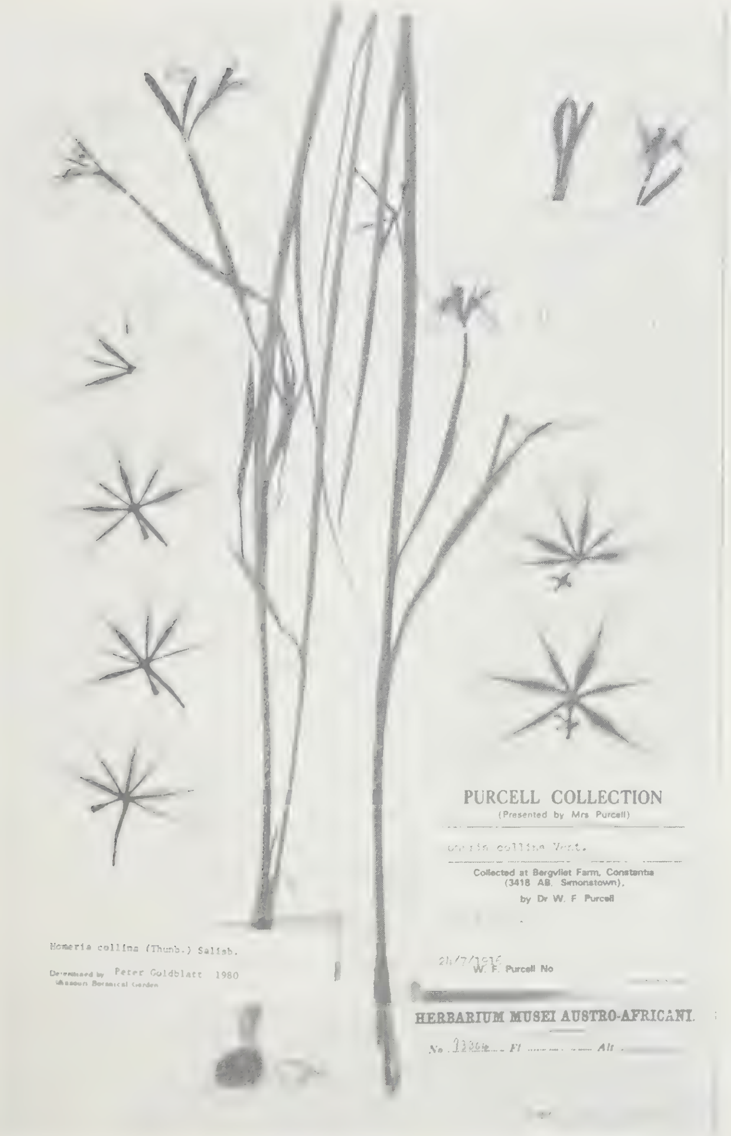

322)
PURCELL COLLECTION
(Presented by Mrs Purcell)
Collected at Bergvliet Farm, Constantia
(3418 AB, Simonstown),
by Dr W. F. Purcell
W F Purcell No
HERBARIUM MUSEI AUSTRO-AFRICANI.

FIG. 3A.



PURCELL COLLECTION
(Presented by Mrs Purcell)

ria collina Vent.

Collected at Bergvliet Farm, Constantia
(3418 AB. Simonstown),
by Dr W. F Purcell

24/7/1916
W. F. Purcell No

HERBARIUM MUSEI AUSTRO-AFRICANI.

No. 13364 Fl .... Alt ....

Homeria collina (Thunb.) Salisb.

Determined by Peter Goldblatt 1980
Missouri Botanical Garden

FIG. 3B.

Typical examples of Purcell's herbarium specimens showing the careful manner of preparation.

as a separate entity, although it was originally part of Van der Stel's farm on which he had exercised grazing rights only. Consequently, it was not subject to any agricultural development during this period.

Between 1716 and 1769 several different persons held title to Bergvliet, but in 1769 Petrus Michel Eksteen acquired the farm and it was he who, in 1775, erected the handsome residence which is still standing today. Three generations of the Eksteen family farmed Bergvliet, until it was again sold, this time passing into the possession of William Frederick Hertzog, in 1865. On Hertzog's death in 1902, Bergvliet passed to his two sisters, Mrs S. W. J. Purcell and Mrs A. M. Jeffcoat. Dr W. F. Purcell, son of Mrs S. W. J. Purcell, managed the farm on behalf of his mother and aunt, between 1902 and 1919, the period during which he began to survey the flora of Bergvliet.

With the death of Dr W. F. Purcell in 1919, the Rev W. Jeffcoat assumed stewardship of the farm on behalf of the family. This situation continued until about 1930, when the farm was divided, the Jeffcoat's acquiring Bergvliet and the upper or northern portion, Kreupelbosch, going to the Purcell descendants. This latter event marks the end of the rural phase in Bergvliet's history. Suburban development was already fast encroaching.

In April 1945, the Divisional Council of the Cape purchased Bergvliet from the Rev W. Jeffcoat for a paltry £15,000 to provide (as had been Jeffcoat's wish and intention), a housing estate for ex-servicemen. In 1952, the upper part of Kreupelbosch, now called Meadowridge, fell to the developers. Today Bergvliet, as it was known to Dr W. F. Purcell, is merely a suburb of greater Cape Town.

From the time of the original land grant until the death of Dr W. F. Purcell in 1919, the natural vegetation cover at Bergvliet appears to have suffered surprisingly little damage. The agricultural development that did take place was largely confined to the fertile valley through which the Keyser's river flows. To the north and east of the homestead lay an area of comparatively undisturbed veld. This veld was used for grazing but due to the rather sandy soil conditions, it was never ploughed. Such was the situation when Purcell started his collecting programme, although invasive pest plants, chiefly *Acacia saligna* and *Pinus pinaster*, were beginning to become a problem.

Purcell must have been very conscious of the destruction being wrought by advancing suburbia. He must also have been perturbed by the effect of grazing on the veld, for he arranged for extensive portions of the farm to be encamped so as to prevent the entry of grazing animals while his survey was in progress. It was therefore with a certain sense of urgency that he devoted the last years of his life to surveying the farm's flora, amassing an herbarium of over 2 500 sheets during that period. Just how comprehensive Purcell's records of the flora of Bergvliet were at the time of his death, we will never know, but they must have been fairly complete.

THE FLORA

Most lowland areas of the Cape Peninsula are now covered by urban sprawl and consequently little, if any, of the natural vegetation there has survived. The Bergvliet check-list is thus of particular importance as it is the only reasonably complete floristic list for a lowlands/flats habitat on the Cape Peninsula.

Situated at a mean elevation of 15 metres above sea level, the surface geology of Bergvliet is dominated by Tertiary to Recent sands in the south, while along the north-western boundary, the soils are derived from pre-Cape Granite. While Purcell was conducting his collecting programme, the estate was made up of several farms, Bergvliet itself, Kreupelbosch and Longueville (Fig. 2), the whole amounting to approximately 343 hectares (± 400 morgen). From this area 595 species of indigenous vascular plants were recorded: 1 pteridophyte, 1 gymnosperm, 185 monocotyledons and 408 dicotyledons. (74 naturalised aliens were also recorded.)

TABLE 1
Species densities from different areas on the Cape Peninsula.

Locality	Cape Peninsula	Cape of Good Hope Nature Reserve	Kirstenbosch Estate	Bergvliet Farm
Surface area in square kilometres	471	77	5,28	3,43
Total number of indigenous vascular plant species (Pteridophytes, Gymnosperms, Angiosperms) excluding naturalised aliens	2 256	1 035	920	595
Percentage of the Cape Peninsula's Flora	100 %	45,8 %	40,7 %	26,4 %

Thus the Bergvliet estate supported 26,4 % of the indigenous species of vascular flora recorded from the Cape Peninsula on a mere 0,7 % of the Peninsula's total surface area! Such figures again emphasise the exceptionally high species' densities in relatively small areas, which have been recorded for the Cape Peninsula (Table 1).

The Cape of Good Hope Nature Reserve (Taylor, 1969) and Kirstenbosch estate (Anon, 1978) are the only other intensively surveyed local areas on the Cape Peninsula, for which floristic data are available. (Tables 1 and 2.) Unlike Bergvliet, these are largely upland or mountainous areas, where soils are almost entirely derived from Table Mountain Sandstone and where shrubby or perennial genera dominate the lists of the largest genera recorded there.

TABLE 2

Comparison between the Kirstenbosch Estate, Cape of Good Hope Nature Reserve and Bergvliet Estate, showing the largest genera, in order of importance, recorded from these areas; species' numbers are given in brackets.

Kirstenbosch Estate (National Botanic Gardens preliminary check-lists, 1978)		Cape of Good Hope Nature Reserve (Taylor, 1969)		Bergvliet Estate	
Erica	(43)	Erica	(22)	Oxalis	(18)
Senecio	(22)	Ficinia	(17)	Erica	(14)
Helichrysum	(21)	Aspalathus	(16)	Senecio	(14)
Tetraria	(17)	Tetraria	(15)	Moraea	(13)
Ficinia	(15)	Restio	(13)	Crassula	(12)
Oxalis	(14)	Cliffortia	(11)	Gladiolus	(11)
Aspalathus	(14)	Pentaschistis	(10)	Helichrysum	(11)
Cliffortia	(13)	Thesium	(9)	Pelargonium	(10)
Crassula	(13)	Helichrysum	(8)	Psoralea	(9)
Restio	(12)	Psoralea	(7)	Cliffortia	(8)
		Crassula	(7)	Ficinia	(8)
		Elegia	(7)		

In contrast, geophytes such as *Oxalis* (18 species), *Moraea* (13 species), *Gladiolus* (11 species), as well as certain tuberous *Pelargonium* species, are important among the largest genera at Bergvliet. While there are certain similarities between the three lists, it seems that edaphic conditions and also the lowland/ flats habitat at Bergvliet, have favoured the establishment of geophytic life forms. Clearly, the loss of this specialised habitat has resulted in a substantial impoverishment of the Cape Peninsula's flora.

ACKNOWLEDGEMENTS

The authors are much indebted to Mrs J. M. H. Purcell of Kreupelbosch, Meadowridge, for providing biographical data on Dr W. F. Purcell (her late father-in-law) and for many other personal reminiscences. We also wish to thank the following specialists for assisting in identifying the herbarium specimens: Prof E. A. Schelpe, Dr A. V. Hall and Mr P. Linder (Orchidaceae), Dr P. Goldblatt (Iridaceae), Prof M. P. de Vos *(Romulea)*, Dr H. Tolken (Crassulaceae), Mrs M. Rand (Hypoxidaceae). Miss E. Esterhuysen (Restionaceae), Mrs A. A. Mauve-Obermeyer (*Tenicroa* and *Urginea*), Dr Ion Williams *(Leucadendron)* and Dr Peter Raven *(Oenothera)*.

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Check List of The Flora of Bergvliet Estate

Aliens are marked with an asterisk*. Numbers placed after each name are the sheet registration in the South African Museum Herbarium. Families, genera and species arranged according to Adamson & Salter (1950).

6. SCHIZAEACEAE

Schizaea pectinata (L.) Swartz 91059.

13. PINACEAE

*Pinus pinea L. 91030.

14. CUPRESSACEAE

Widdringtonia nodiflora (L.) Powrie 91031.

15. TYPHACEAE

Typha latifolia L. ssp. capensis Rohrb. 91020–91026; 91028; 91029.

18. SCHEUCHZERIACEAE

Triglochin striata Ruiz. & Pav. 91039; 91040.
bulbosa L. 91041–91058.

20. GRAMINEAE

Cymbopogon marginatus Stapf. 91038.
Ehrharta bulbosa Sm. 91032.
Stipagrostis zeyheri (Nees) de Wint. 91037.
Pentaschistis sp. 91036.
Eragrostis capensis (Thunb.) Trin. 91033–91035.

21. CYPERACEAE

Cyperus ? rotundus L. 90929; 90930.
Scirpus antarcticus L. 90922.
hystrix Thunb. 90921.
Ficinia deusta (Berg.) Levyns 90912–90917.
tristachya (Rottb.) Nees 90909–90911.
paradoxa (Schrad.) Nees 90908.
indica (Lam.) Pfeiff. 90905; 90906.
bulbosa (L.) Nees 90901–90904.
secunda (Vahl) Kunth 90907.
Ficinia pallens (Schrad.) Nees 90918; 90919.
radiata Kunth 90900.
Fuirena hirsuta (Berg.) P. L. Forbes 90920.
Asterochaete glomerata (Thunb.) Nees 90931.
Tetraria cuspidata (Rottb.) C.B. Cl. 90924–90927.
compar (L.) Lestib. 90923.
bromoides (Lam.) Pfeiff. 90928.
Carex aethiopica Schkuhr. 90932

22. ARACEAE

Zantedeschia aethiopica (L.) Spreng. 91060

24. RESTIONACEAE

Restio tetragonus Thunb. 90845.
harveyi Mast. 90846.
Chondropetalum microcarpum (Kunth) Pillans 90836–90839.
Thamnochortus fruticosus Berg. 90843; 90844.
Willdenowia striata Thunb. 90840–90842.

29. LILIACEAE

Tulbaghia alliacea L.f. 91121; 91123–91126.
Kniphofia uvaria (L.) Hook f. 90933; 90934.
Asparagus capensis L. 90889.
asparagoides (L.) Wight 90879–90885.
crispus Lam. 90886–90888.
rubicundus Berg. 90894–90897.
Eriospermum nanum Marloth 90984–90987.
lanceaefolium Jacq. 90988–90992; 90996; 90997; 90999–91001.
cernuum Baker 90993–90995; 90998 sp. 91002–91006.

Trachyandra filiformis (Ait.) Oberm. 90967–90969.
chlamydophylla (Bak.) Oberm. 90954–09056.
hispida (L.) Kunth 90938–90944.
hirsutiflora (Adamson) Oberm. 90949–90953.
ciliata (L.f.) Kunth 90935–90937.
hirsuta (Thunb.) Kunth 90963–90966.
brachypoda (Bak.) Oberm. 90957–90962.
Anthericum rangei Engler & Krause 90945–90948.
Caesia contorta (L.f.) Dur. & Schinz 91122; 91127–91131.
Bulbine favosa Roem. & Schult. 90971–90977.
lagopus (Thunb.) N.E. Br. 90978.
pugioniformis Link 90979–90983.
Bulbinella triquetra Kunth 90970.
Ornithogalum hispidum Hornem. ssp. bergii (Schtdl.) Oberm. 91115–91120.
graminifolium Thunb. 91110–91112; 91114.
dregeanum Kunth 91113.
Albuca canadensis (L.) Leighton 91088–91091.
cooperi Baker 91093.
juncifolia Baker 91092.
Tenicroa filifolia (Jacq.) Oberm. 91098; 91105–91109.
young filifolia (Jacq.) Oberm. 91099
exuviata (Jacq.) Speta. 91100–91104.
Urginea ecklonii Baker 91096.
? ecklonii Baker 9194; 91095; 91097.
Lachenalia rubida Jacq. 90383; 90386.
unifolia Jacq. var. wrightii (Bak.) Bak. 90379; 90380.
variegata Barker 90381; 90382; 90387.
orchioides (L.) Ait. 90388–90390.
reflexa Thunb. 90384; 90385.
Baeometra uniflora (Jacq.) Lewis 91068; 91069.
Dipidax punctata (L.) Hutch. 91075–91079.
Wurmbea spicata (Burm.) Dur. & Schinz 91070–91072.
Ornithoglossum viride (L.f.) Ait. 91073; 91074.
Androcymbium capense (L.) Krause 91080–91084.
eucomoides (Jacq.) Willd. 91085–91087.

30. HAEMODORACEAE

Wachendorfia thyrsiflora L. 90847.
Wachendorfia paniculata L. 90848; 90849; 90857–90861
brachyandra Barker 90850–90853.
parviflora Barker 90854–90856.

31. AMARYLLIDACEAE

Haemanthus rotundifolius Ker-Gawl. 90868–90872.
Boophane guttata (L.) Herb. 90873–90875.
Brunsvigia orientalis (L.) Ait. ex Eckl. 90876–90878.
Gethyllis pusilla Baker 91010; 91011.
afra L. 91007–91009; 91012–91019.
Hessea cinnamomea (L'Hérit.) Dur. & Schinz 90864–90867.
Pauridia minuta (L.f.) Dur. & Schinz 90862; 90863.
Empodium plicatum (Thunb.) Garside 91061–91067.
Spiloxene alba (Thunb.) Fourc. 91285–91287.
schlechteri (H. Bol.) Garside 91237–91245.
curculigoides (H. Bol.) Garside 91279–91284.
capensis (L.) Garside 91223–91236; 91248–91278.
canaliculata Garside 52052; 91247.
gracilipes (Schltr.) Garside 91246.

32. IRIDACEAE

Romulea flava (Lam.) De Vos var. flava 91136–91142; 91154.
flava (Lam.) De Vos var. minor (Beg.) De Vos 91132–91135.
flava (Lam.) De Vos var. viridiflora (Beg.) De Vos 91143–91150.
hirsuta Bak. 91176; 91177.
triflora (Burm.) N.E. Br. 91178–91181.
cruciata Bak. var. intermedia (Beg.) De Vos 91166.
rosea (L.) Eckl. var. australis (Ewart) De Vos 91167; 91182–91189; 91194–91196.
rosea (L.) Eckl. var. communis De Vos 91168–91172; 91190–91193.
rosea (L.) Eckl. var. reflexa (Eckl.) Beg. 9115–91165.
rosea (L.) Eckl. var. rosea 91173–91175.
obscura Klatt 91151–91153.
Galaxia alata Goldblatt 93388.
versicolor Salisb. ex Klatt 93389.
Hexaglottis virgata Sweet 90137; 90138.
lewisiae Goldbl. 90135; 90136.

- Moraea angusta (Thunb.) Ker 59718.
  - bituminosa (L.f.) Ker 90230–90232.
  - gawleri Spreng. 90172; 90233; 90174; 90176; 90177.
  - elsiae Goldbl. 90173; 90175.
  - fugax (de la Roche) Jacq. 90133; 90190; 90192–90194; 90134.
  - inconspicua Goldbl. 90062–90064.
  - lugubris (Salisb.) Goldbl. 90222; 90224; 90227.
  - neglecta Lewis 59719.
  - papilionacea (L.f.) Ker 90223; 90225; 90226; 90228; 90229.
  - ramosissima (L.f.) Druce 90184–90186.
  - tricuspidata (L.f.) Lewis 90178–90181.
  - tripetala (L.f.) Ker 90187–90189; 90191.
  - vegeta L. 90182; 90183.
- Homeria collina Vent. 93362–93376; 93400; 93401.
  - flaccida Sweet 93349–93356; 93393–93396; 93402.
  - miniata (Andr.) Sweet 93377–93380
  - minor (Eckl.) Goldbl. 93357–93361; 93392; 93397–93399.
- Aristea spiralis (L.f.) Ker 90119.
  - macrocarpa Lewis 90117; 90118.
  - pauciflora W. Dod 90120–90122.
  - cuspidata Schinz 90126–90128.
  - africana (L.) Hoffmsgg. 90123–90125.
  - glauca Klatt 90114–90116.
- Watsonia pyramidata (Andr.) Stapf 90202; 90203.
  - angusta Ker 90204.
  - meriana Mill. 90129.
  - humilis Mill. 90130–90132.
- Micranthus alopecuroides (L.) Eckl. 90104–90113.
  - tubulosus (Burm.) N.E. Br. 90095–90100.
  - junceus (Bak.) N.E. Br. 90101–90103.
- Thereianthus bracteolatus (Lam.) Lewis 90201.
- Lapeirousia corymbosa (L.) Ker ssp. corymbosa 90197–90200.
  - anceps (L.f.) Ker 90195; 90196.
- Antholyza ringens L. 90208–90210.
- Babiana stricta (Ait.) Ker var. stricta 90072; 90073.
  - villosula (Gmel.) Ker ex Steud. 90080; 90083; 90085; 90074–90076.
  - ambigua (R. & S.) Lewis 90078; 90079; 90081; 90082; 90084; 90086.
- Sparaxis grandiflora (de la Roche) Ker 90087–90091.
  - bulbifera (L.) Ker 9002.
- Anapalina triticea (Burm.) N.E. Br. 90212–90214.
- Tritoniopsis parviflora (Jacq.) Lewis 90205.
- Ixia polystachya L. 90215–90221.
- Hesperantha pilosa (L.f.) Ker 93334; 93335.
  - graminifolia D. Don 93331–93333.
  - falcata (L.f.) Ker 93336.
- Engysiphon roseus (Schinz) Lewis 90093; 90094.
- Geissorhiza aspera Goldblatt 9326–93330; 93337–93339.
  - ovata (Burm.) Asch & Graeb. 93346–93348.
  - juncea (Link) A. Dietr. 93344; 93345.
  - humilis Ker 93342; 93343; 93390; 93391.
  - imbricata (de la Roche) Ker 93340; 93341.
- Gladiolus alatus L. var. alatus 90149; 90150.
  - punctulatus Schrank var. punctulatus 90155–90157.
  - brevifolius Jacq. 90069; 90139–90144.
  - ornatus Klatt 90066; 90067.
  - carneus de la Roche 90158.
  - undulatus L. 90163; 90164.
  - carinatus Ait. 90170; 90171.
  - gracilis Jacq. 90065; 90159–90162; 90165–90169.
  - maculatus Sweet 90151–90154.
  - hyalinus Jacq. 90145–90148.
  - liliaceus Houtt. 90068; 90070; 90071.
- Homoglossum priori N.E. Br. 90211.
- Chasmanthe aethiopica (L.) N.E. Br. 90206; 90207.

33. ORCHIDACEAE

- Acrolophia bolusii Rolfe 91210.
  - lamellata (Lindl.) Schltr. & Bol. 91211; 91221.
- Eulophia aculeata (L.f.) Spreng ssp. aculeata 91209.
- Holothrix villosa Lindl. 91201; 91202.
- Satyrium ligulatum Lindl. 91208.
  - bicorne (L.) Thunb. 91203.
  - coriifolium Swartz 91206.
  - odorum Sond. 91205; 91222.
  - bicallosum Thunb. 91207.
  - bracteatum (L.f.) Thunb. 91204.
- Monadenia atrorubens (Schltr.) Rolfe 91218.
  - bracteata (Sw.) Dur. & Sch. 91219; 91220.
- Herschelia lacera (Swartz) Lewis 91216; 91217.

Disa cornuta (L.) Swartz 91215.
Disperis capensis (L.f.) Swartz 91199.
  villosa (L.f.) Swartz 91197; 91198.
Ceratandra atrata (L.) Dur. & Schinz 91200.
Corycium orobanchoides (L.f.) Swartz 91212.
Pterygodium catholicum (L.) Swartz 91213; 91214.

35. SALICACEAE

Salix hirsuta Thunb. 90835.

36. MYRICACEAE

Myrica quercifolia L. 90832; 90833.
  serrata Lam. 90834.

41. URTICACEAE

*Urtica urens L. 90831.

42. PROTEACEAE

Leucadendron floridum R. Br. 89724; 89725; 89730.
  salignum Berg. 89731–89734.
  levisanus Berg. 89728; 89729.
  laureolum (Lam.) Fourcade 89723.
Protea coronata Lam. 89708; 89709.
  cynaroides (L.) L. 89715; 89716.
  repens (L.) L. 89710–89712.
  scolymocephala (L.) Reich. 89713.
  acaulos (L.) Reich. 89714.
Leucospermum hypophyllocarpodendron (L.) Druce 89705–89707.
Diastella proteoides (L.) Druce 89726; 89727.
Serruria fasciflora Salisb. ex Knight 89718; 89719.
  glomerata (L.) R. Br. 89717.
  cyanoides R. Br. 89720.
*Hakea tenuifolia (Salisb.) Domin 89721.
  *gibbosa (Sm.) Cav. 89722.

43. SANTALACEAE

Thesium virgatum Lam. 90771–90774.
  euphrasioides A. DC. 90761.
  ecklonianum Sond. 90760.
  scabrum L. 90764; 90765.
  capitatum L. 90766.
  funale L. 90767–90770.
  aggregatum A. W. Hill 90762; 90763.

45. LORANTHACEAE

Viscum capense Thunb. 90819; 90820.

48. POLYGONACEAE

*Polygonum aviculare L. 89739–89741.
  salicifolium Brouss. ex Willd. 89735; 89736.
  setulosum Rich. 89778–89780.
  lapathifolium L. 89737; 89738; 89742.
Rumex cordatus Desf. 89762; 89763.
  sagittatus Thunb. 89761.
  lativalvis Meisn. 89747–89750.
  *crispus L. 89755; 89757; 89758.
  *conglomeratus Murr. 89759; 89760.
  *pulcher L. 89753; 89754; 89756.
*Acetosella vulgaris (Koch) Fourr. 89743–89746.
Emex australis Steinh. 89764.

49. CHENOPODIACEAE

*Chenopodium album L. 89771–89773.
  *murale L. 89774–89777.
Exomis microphylla (Thunb.) Aellen var. axyroides Aellen 89765–89767.

50. AMARANTHACEAE

*Amaranthus hybridus L. 89800–89802.
  thunbergii Moq. 89769; 89770.

52. AIZOACEAE

Pharnaceum elongatum (DC.) Adamson 89876–89878.
  lanatum Bartl. 89879; 89880.
  dichotomum L.f. 89881.
Aizoon paniculatum L. 89866; 89867.
  sarmentosum L.f. 89864; 89865.
Adenogramma glomerata (L.f.) Druce 89870–89872.
Polpoda capensis Presl 89873–89875.
Carpanthea pomeridiana (L.) N.E.Br. 90407.
Dorotheanthus bellidiformis (Burm.) N.E.Br. 90406.
Lampranthus reptans (Ait.) N.E.Br. 90394–90396.
  ? calcaratus (Wolley-Dod) N.E.Br. 90401.
  emarginatus (L.) N.E.Br. 90402.
  aduncus (Haw.) N.E. Br. 90400.
  filicaulis (Haw.) N.E. Br. 90397–90399.
  glaucus (L.) N.E. Br. 90403.
  aurantiacus (DC.) Schwant. 90404; 90405.
Ruschia sarmentosa (Haw.) Schwant. 90393.

54. CARYOPHYLLACEAE

*Stellaria media (L.) Vill. 89476.
*Spergula arvensis L. 89475.
*Polycarpon tetraphyllum L.f. 89474.
Corrigiola litoralis L. 89781.
*Silene gallica L. 89478; 89480.
  clandestina Jacq. 89479.
  ? burchellii Otth. ex DC. 89481.
Dianthus albens Ait. 89482–89486.
*Agrostemma githago L. 89477.

55. NYMPHAEACEAE

Nymphaea capensis Thunb. 89466.

56. RANUNCULACEAE

Knowltonia vesicatoria (L.f.) Sims 89470.
Ranunculus multifidus Forsk. 89471; 89472.

57. MENISPERMACEAE

Antizoma capensis (Thunb.) Diels 89467–89469.

58. LAURACEAE

Cassytha ciliolata Nees 89768.

59. PAPAVERACEAE

*Fumaria officinalis L. 89464; 89465.

60. CRUCIFERAE

*Diplotaxis muralis (L.) DC. 89446; 89447.
*Raphanus raphanistrum L. 89440–89442.
Heliophila pusilla L.f. 89458; 89459.
  ? coronopifolia L. 89460.
  diffusa (Thunb.) DC. 89462.
  africana (L.) Marais 89450–89457.
  ? pendula Willd. 89461.
*Coronopus didymus (L.) Sm. 89443.
*Capsella bursa-pastoris (L.) Medic. 89444; 89445.
*Barbarea verna (Mill.) Aschers 89448.
*Rorippa nasturtium-aquaticum (L.) Hayek 89463.

62. DROSERACEAE

Drosera cistiflora L. 89836–89840.
  trinervia Spreng. 89844; 89845.
  capensis L. 89841–89843.

63. CRASSULACEAE

Crassula natans Thunb. var. natans 90061.
  natans Thunb. var. filiformis (E. & Z.) Toelken 90060.
Crassula decumbens Thunb. var. decumbens 90055.
  glomerata L. 90056–90059; 90899.
  thunbergiana Schult. ssp. thunbergiana 90050–90053.
  umbellata Thunb. 90054.
  pellucida L. ssp. pellucida 90041.
  capensis (L.) Baill. var. capensis 90042; 90043.
  cymosa Berg. 90047; 90048.
  flava L. 89829–89835.
  nudicaulis L. var. nudicaulis 90044.
  fallax Friedr. 90049.
  strigosa L. 90045; 90046.

64. SAXIFRAGACEAE

Montinia caryophyllacea Thunb. 89861–89863.

66. BRUNIACEAE

Staavia radiata Dahl 89848; 89849.
Berzelia abrotanoides Brongn. 89846; 89847.

67. ROSACEAE

Alchemilla capensis Thunb. 90039; 90040.
Cliffortia falcata L.f. 90028–90031.
  obcordata L.f. 90023; 90024.
  stricta H. Weimarck 90898.
  juniperina L.f. 90021; 90022.
  filifolia L.f. 90018–90020.
  polygonifolia L. 90032–90035.
  strobilifera Murr. 90025; 90026.
  ferruginea L.f. 90027.
Rubus pinnatus Willd. 90038.
  fruticosus L. 90036; 90037.

68. LEGUMINOSAE

Podalyria calyptrata Willd. 89697; 89698.
  calyptrata Willd. x cuneifolia Vent. 89896.
  biflora (Retz.) Lam. 89699; 89700.
  sericea R. Br. 89701–89703.
  cuneifolia Vent. 89694; 89695.
Virgilia oroboides (Berg.) Salter 89955; 89956.
Amphithalea ericifolia (L.) E. & Z. 89670.
Liparia splendens (Burm. f.) J. J. Bos & de Wit 89704.
Priestleya sericea (L.) E. Mey. 89669.
Rafnia capensis (L.) Druce 89876; 89674; 89671.
  angulata Thunb. 89672; 89673; 89675.
  triflora Thunb. 89677–89679.

Crotalaria capensis Jacq. 89937.
Lotononis peduncularis Benth. 89690; 89691.
*Cytisus candicans Lam. 89938.
Lebeckia carnosa (E. Mey.) Druce 89687; 89688.
  meyeriana E. & Z. 89689.
Aspalathus cordata (L.) R. Dahlgr. 89680.
  angustifolia (Lam.) R. Dahlgr. 89681–89683.
  linearis (Burm. f.) R. Dahlgr. ssp. linearis 89684–89686.
Psoralea pinnata L. 89898–89903.
  fruticans (L.) Druce 89888–89891.
  decumbens Ait. 89892–89895.
  fascicularis DC. 89897.
  capitata L.f. 89896.
  aphylla L. 89904–89906.
  alata (Thunb.) Salter 89885.
  laxa Salter 89886; 89887.
  imbricata (L.) Salter 89882–89884.
*Trifolium campestre Schreb. 89911; 89912.
  *dubium Sibth. 89913; 89914.
  *angustifolium L. 89907–89909.
  burchellianum Ser. 89915; 89916.
*Medicago polymorpha L. 89932.
*Melilotus indica All. 89910.
Indigofera cytisoides Thunb. 89933–89935.
  mauritanica (L.) Thunb. 89924–89926.
  capillaris Thunb. 89917–89919.
  angustifolia L. 89920–89923.
  psoraleoides L. 89927.
  incana Thunb. 89928–89931.
Sutherlandia frutescens (L.) R. Br. 89939, 89940.
Lessertia capensis (Berg.) Druce 89941.
  herbacea (L.) Druce 89942; 89943.
*Lathyrus latifolius L. 89952; 89953.
*Vicia sativa L. 89945.
  angustifolia Roth 89946.
  *hirsuta (L.) S. F. Gray 89948.
  *tetrasperma (L.) Moench 89949; 89950.
  *atropurpurea Desf. 89947.
  *varia Host. 89951.
Rhynchosia capensis (Burm.) Schinz 89954.
Bolusafra bituminosa (L.) Kuntze 89944.
Dipogon lignosus (L.) Verdc. 89936.

69. GERANIACEAE

*Geranium dissectum L. 89521.
Pelargonium marginatum R. Knuth 89516; 89517.
  longifolium (Burm. f.) Jacq. 89518–89520.
Pelargonium triste (L.) Ait. 89515; 89530.
  myrrhifolium (L.) Ait. 89529; 89531.
  alchemilloides (L.) Ait. 89528.
  chamaedrifolium Jacq. 89526.
  grossularioides (L.) Ait. 89527.
  cucullatum (L.) Ait. 89533.
  capitatum (L.) Ait. 89532.
  betulinum (L.) Ait. 89525.
*Erodium moschatum L'Her. 89522–89524.

70. OXALIDACEAE

Oxalis pes caprae L. 89539; 89540.
  compressa L.f. 89538.
  dentata Jacq. 89547.
  incarnata L. 89588.
  lanata L.f. 89541–89544.
  obtusa Jacq. 89565–89569.
  luteola Jacq. 89545; 89546.
  bifida Thunb. 89548.
  purpurea L. 89589; 89595–89607.
  punctata L.f. 89608–89610.
  depressa E. & Z. 89549.
  eckloniana Presl var. sonderi Salter 89591; 89592.
  hirta L. 89550–89553.
  nidulans E. & Z. var. nidulans 89590; 89593; 89611; 89581; 89582; 89584; 89585.
  nidulans E. & Z. var. denticulata (W. Dod) Salter 89586; 89587.
  commutata Sond. 89580.
  glabra Thunb. 89534–89537; 89612–89615.
  versicolor L. 89570–89579.
  polyphylla Jacq. 89554–89560; 89562; 89563.

71. LINACEAE

Linum africanum L. 89503.
  *usitatissimum L. 89502.

72. ZYGOPHYLLACEAE

Zygophyllum sessilifolium L. 89501.

73. RUTACEAE

Diosma hirsuta L. 89821; 89822; 89825–89827.
  oppositifolia L. 89818–89820; 89823; 89824; 89828.
Adenandra villosa (Berg.) Licht. ex Roem. & Schultes var. biseriata (Mey. ex Bartl. & Wendl.) Strid 89814.
Macrostylis villosa (Thunb.) Sond. 89813; 89815–89817.

Agathosma imbricata (L.) Willd. 89804–89808.
  glabrata Bartl. & Wendl. 89803; 89809–89812.

74. POLYGALACEAE

Polygala myrtifolia L. 89429.
  garcini DC. 89431–89436.
  refracta DC. 89430.
Nylandtia spinosa (L.) Dumort 89487–89491.
Muraltia heisteria (L.) DC. 89423; 89634; 89492–89496.
  filiformis (Thunb.) DC. 89414; 89419; 89420.
  ericoides (Burm. f.) Steud. 89498–89500.
  ? alopecuroides (L.) DC. 89497.
  thymifolia (Thunb.) DC. 89415–89418; 89422.
  thunbergii E. & Z. 89424–89428.
  brevicornu DC. 89421.

75. EUPHORBIACEAE

*Euphorbia peplus L. 90828; 90829.
  *helioscopia L. 90826; 90827.
  erythrina Link 90821; 90822.
  tuberosa L. 90823–90825.
Clutia alaternoides L. 90830.
*Mercuralis annua L. 89751; 89752.

76. ANACARDIACEAE

Rhus rosmarinifolia Vahl 89617–89620.
  angustifolia L. 89616.
  angustifolia L. x rosmarinifolia Vahl 89621; 89622.
  tomentosa L. 89623–89625.
  laevigata L. 89644–89652.
  glauca Desf. 89627–89629.
  lucida L. 89626; 89630–89632.

77. CELASTRACEAE.

Maytenus heterophylla (E. & Z.) N. Robson 89653–89654.
  oleoides (Lam.) Loes. 89655–89657; 89668.
Pterocelastrus tricuspidatus (Lam.) Sond. 89659–89663.
Cassine peragua L. 89658.

82. RHAMNACEAE

Phylica cephalantha Sond. 89667.
  imberbis Berg. 89664–89666.
  plumosa L. 89640–89643.
  parviflora Berg. 89635–89637.
  stipularis L. 89639; 89638.

85. MALVACEAE

*Malva parviflora L. 89473.
*Lavatera cretica L. 89633.
Anisodontea scabrosa (L.) Bates 89514.
Hibiscus aethiopicus L. 89512.
  *diversifolius Jacq. 89510; 89511.
  *trionum L. 89513.

86. STERCULIACEAE

Hermannia althaeifolia L. 89504.
  cuneifolia Jacq. var. cuneifolia 89505–89507.
  lacera Fourcade 89508; 89509.

91. VIOLACEAE

*Viola arvensis Murr. 89439.

92. FLACOURTIACEAE

Kiggelaria africana L. 89437; 89438.

93. PENAEACEAE

Penaea mucronata L. 90817; 90818.
Stylapterus fruticulosus (L.f.) A. Juss. 89692; 89693.

95. THYMELAEACEAE

Gnidia laxa (L.f.) Gilg 90780–90782.
  inconspicua Meisn. 90800; 90801.
  nana (L.f.) Wikstrom 90799.
  pinifolia L. 90793; 90794.
  viridis Berg. 90788–90792; 90795–90798.
Struthiola striata Lam. 90810–90812.
  dodecandra (L.) Druce 90813–90816.
  ciliata (L.) Lam. 90802–90809.
Lachnaea capitata (L.) Meisn. 90786; 90787.
Cryptadenia uniflora (L.) Meisn. 90784; 90785.
Passerina vulgaris Thoday 90783

96. LYTHRACEAE

Lythrum hyssopifolia L. 89859.

98. OENOTHERACEAE

Epilobium tetragonum L. 89860.
*Oenothera affinis Camb. 93384.
  *erythrosepala Borbás 93381.
  *indecora Cambess. ssp. bonariensis Dietr. 93387.
  *longiflora L. 93382; 93383.
  *parviflora L. 93386.
  *stricta Ledeb. ex Link 93385.

99. HALORHAGACEAE

Gunnera perpensa L. 89853–89858.
Laurembergia repens Berg. 89850–89852.

101. UMBELLIFERAE

Centella coriacea Nannfd. 89957.
  tridentata (L.f.) Druce 89958–89961.
  glabrata L. 89962.
  macrocarpa (Rich.) Adamson 89963–89968.
Arctopus echinatus L. 89969–89971.
Torilis arvensis (Huds.) Links 90408; 90409.
Lichtensteinia lacera Cham. & Sch. 89978–89981; 90415–90417.
  beiliana Eck. & Zeyh. 89973–89977; 90418.
Sonderina hispida (Thunb.) Wolff 89972; 89982.
Thunbergiella filiformis (Lam.) Wolff 89983–90006; 90412; 90413.
*Foeniculum vulgare Mill. 90414.
Annesorrhiza capensis Ch. & Sch. 90007–90017.
Peucedanum sieberianum Sond. 90410; 90411.
Umbelliferae seedlings 90391; 90392.

103. ERICACEAE

Erica plukeneti L. 90419; 90455.
  cerinthoides L. 90423; 90424.
  mammosa L. 90420; 90421; 90423.
  mauritanica L. 90446.
  subdivaricata Berg. 90432–90434.
  ferrea Berg. 90429; 90447; 90448.
  nudiflora L. 90049.
  viscaria L. 90428.
  decora Andr. 90427.
  pulchella Houtt. 90430; 90431.
  lasciva Salisb. 90452–90454.
  imbricata L. 90450; 90452.
  corifolia L. 90456–90458.
  baccans L. 90425; 90426.
Philippia chamissonis Kl. 90441.
Blaeria ericoides L. 90435.
Syndesmanthus articulatus (L.) Kl. 90436; 90437.
Salaxis flexuosa Kl. 90442–90445.
Scyphogyne muscosa (Ait.) Druce 90438–90440.

104. MYRSINACEAE

Myrsine africana L. 90730–90734.

105. PRIMULACEAE

*Anagallis arvensis L. 90716–90719.

108. EBENACEAE

Diospyros whyteana (Hiern.) F. White 90725.
  glabra (L.) De Winter 90720–90724.
Euclea racemosa Murr. 90726–90729.

109. OLEACEAE

Olea capensis L. 90347–90350.
  exasperata Jacq. 90343.
  africana Mill. 90344–90346.

111. GENTIANACEAE

Sebaea aurea (L.f.) R. & S. 90355–90365.
  schlechteri Schinz 90352.
  micrantha (Cham. & Schlechtd.) Schinz var. micrantha 90354.
  micrantha (Cham. & Schlechtd.) Schinz var. intermedia (Cham. & Schlechtd.) Marais 90366.
  exacoides (L.) Schinz 90351; 90353.
Orphium frutescens (L.) E. Mey. 90375–90378.
Chironia baccifera L. 90367–90369.
  linoides L. ssp. emarginata (Jarosz) Verdoorn 90370–90374.

113. ASCLEPIADACEAE

Microloma tenuifolium (L.) K. Schum. 90735; 90736.
Schizoglossum aschersonianum Schltr. 90737–90740.
Asclepias crispa Berg. 90749–90752.
  cancellata Burm. 90757–90759.
  fruticosa L. 90753–90756.
Cynanchum africanum R. Br. 90747; 90748.
Eustegia minuta R. Br. 90741–90746.

114. CONVOLVULACEAE

Cuscuta nitida E. Mey. ex Choisy 90645–90650.
  sp. 90651.

115. BORAGINACEAE

Lobostemon trichotomus (Thunb.) DC. 90638–90640.
  fruticosus (L.) Buek 90641–90644.

116. VERBENACEAE

Stilbe ericoides L. 90777–90779.
*Verbena bonariensis L. 90775; 90776.

117. LABIATAE
Salvia africana L. 89783.
chamelaeagnea Berg. 89782.
Stachys aethiopica L. 89788; 89789.
*arvensis L. 89784–89787.
Leonotis leonurus R. Br. 89790; 89791.

118. SOLANACEAE
Lycium afrum L. 90652–90660.
*Datura stramonium L. 90661–90664.

119. SCROPHULARIACEAE
*Verbascum virgatum Stokes 90637.
Hemimeris montana L.f. 90634–90636.
Diascia nemophiloides Benth. 90626.
Nemesia barbata (Thunb.) Benth. 90631–90633.
pinnata (L.f.) E. Mey. ex Benth. 90627; 90628.
versicolor E. Mey. ex Benth. 90629; 90630.
Polycarena heterophylla (L.f.) Levyns 90588; 90599.
Sutera tristis (L.f.) Hiern 90622; 90623.
Manulea tomentosa L. 90619–90621.
*Veronica tournefortii K. C. Gmelin 90624; 90625
Alectra sessiliflora (Vahl) Kuntze 90612–90615; 90617.
Bartsia trixago L. 90610.
Harveya capensis Hook. 90618.
Hyobanche sanguinea L. 90611.
*Orobanche ramosa L. 90609.

120. SELAGINACEAE
Selago corymbosa L. 90593–90596.
spuria L. 90590–90592.
Microdon capitatus (Berg.) Levyns 90602.
Dischisma capitatum (Thunb.) Choisy 90597.
ciliatum (Berg.) Choisy 90598–90601.
Hebenstreitia dentata L. 90603–90606.

122. MYOPORACEAE
Oftia africana (L.) Bocq. 90607; 90608.

123. PLANTAGINACEAE
*Plantago major L. 89792–89794.
lanceolata L. 89795–89799.

124. RUBIACEAE
Anthospermum aethiopicum L. 90324–90330.
bergianum Cruse 90331–90334.
Anthospermum prostratum Sond. 90322; 90323.
ciliare L. 90335–90339.
Nenax acerosa Gaertn. 90340–90342.

125. DIPSACACEAE
Scabiosa columbaria L. 90531–90533.

127. CUCURBITACEAE
Zehneria scabra (L.f.) Sond. 89869; 89869.

128. CAMPANULACEAE
Prismatocarpus fruticosus L'Herit. 90692.
sessilis Eckl. ex A. DC. 90691.
Roella ciliata L. 90698–90704.
prostrata E. Mey. ex A. DC. 90693–90697.
Microdon glomeratum A. DC. 90705–90715.
Wahlenbergia capensis (L.) A. DC. 90683–90686.
cernua (Thunb.) A. DC. 90681; 90682.
procumbens (L.f.) A. DC. 90678–90680.
exilis A. DC. 90687; 90690.
? subpilosa von Brehm. 90688; 90689.
Lightfootia subulata L'Herit. 90670–90672.
longifolia A. DC. 90665–90669.
Cyphia bulbosa (L.) Berg. 90673–90677.
Laurentia secunda (L.f.) Kuntze 90307–90311.
arabidea (Presl) A. DC. 90306.
Monopsis simplex (L.) E.Wimm. 90312; 90313.
lutea (L.) Urban 90317–90321.
Lobelia coronopifolia L. 90294–90298.
setacea Thunb. 90303; 90304.
comosa L. 90287–90290.
alata Labill. 90305.
erinus L. 90299–90302.
depressa L.f. 90291–90293.
Grammatotheca bergiana (Cham.) Presl 90314–90316.

129. COMPOSITAE
Corymbium glabrum L. 90526.
africanum L. 90527–90530.
Felicia fruticosa (L.) Nichols 90523–90525.
*Conyza ambigua DC. 90520–90522.
ivaefolia (L.) Less. 90518; 90519.
Chrysocoma coma-aurea L. 90511.
Ifloga seriphioides (Berg.) Bol. & Wolley Dod 90509; 90510.
Gnaphalium candidissimum Lam. 90480–90484.
*luteo-album L. 90476–90479.

Helipterum gnaphaloides (L.) DC. 90508.
Helichrysum indicum (L.) Grierson 90501; 90502.
  rutilans (L.) Don 90505–90507.
  asperum (Thunb.) Hilliard & Burtt 90503; 90504.
  serpyllifolium (Berg.) Pers. 90499; 90500.
  foetidum (L.) Moench 90498.
  cymosum (L.) D.Don 90496; 90497.
  niveum (L.) Less 90488–90490.
  maritimum (L.) D.Don ex G.Don 90491; 90492.
  teretifolium (L.) Sweet 90493; 90494.
  helianthemifolium (L.) D.Don 90485–90487.
  patulum (L.) D.Don 90495.
Leontonyx glomeratus (L.) DC. 90517.
Petalacte coronata (L.) D.Don 90515; 90516.
Stoebe plumosa (L.) Thunb. 90459–90461.
  capitata Berg. 90462–90464.
  fusca (L.) Thunb. 90465–90470.
Disparago lasiocarpa Cass. 90474; 90475.
Elytropappus gnaphaloides (L.) Levyns 90513.
  rhinocerotis (L.f.) Less. 90512.
Metalasia muricata (L.) Don 90278–90282.
  brevifolia (Lam.) Levyns 90274; 90275.
  cephalotes (Thunb.) Less. 90276; 90277.
Pulicaria scabra (Thunb.) Druce 90471.
Osmitopsis asteriscoides (Berg.) Less. 90472.
*Bidens pilosa L. 90473.
Athanasia dentata L. 90284.
  crithmifolia L. 90285; 90286.
  trifurcata L. 90283.
Eroeda capensis (L.) Levyns 90271–90273.
Pentzia suffruticosa (L.) Hutch. ex Merxm. 90586.
Cotula turbinata L. 90581–90585.
Senecio littoreus Thunb. 90268; 90269.
  abruptus Thunb. 90265–90267.
  arenarius Thunb. 90251; 90252.
  purpureus L. 90250; 90263.
  erosus L.f. 90264.
Senecio cymbalariifolius (L.) Less. 90270
  pubigerus L. 90237–90239.
  rigidus L. 90255; 90256.
  rosmarinifolius L.f. 90257; 90258; 90262.
  halimifolius L. 90253; 90254.
  burchellii DC. 90248; 90249; 90260; 90261.
  foeniculoides Harv. 90259.
  pinifolius (L.) Lam. 90240–90242.
  triqueter Less. 90243–90247.
Gymnodiscus capillaris (L.f.) Less. 90587; 90588.
Castalis nudicaulis (L.) T. Norl. 90234–90236.
Othonna filicaulis Jacq. 90575–90577.
  digitata L.f. 90572.
  bulbosa L. 90573; 90574.
  stenophylla Levyns 90578–90580.
  quinquedentata Thunb. 90569–90571.
Osteospermum imbricatum L. 90567.
  dentatum Burm. f. 90568.
Chrysanthemoides moniliferum (L.) T.Norl. 90565, 90566.
Ursinia chrysanthemoides (Less.) Harv. 90562.
  anthemoides (L.) Poir. 90563; 90564.
Arctotheca calendula (L.) Levyns 90561.
Arctotis acaulis L. 90558.
  breviscapa Thunb. 90559.
  angustifolia L. 90560.
Gazania pectinata (Thunb.) Spreng. 90557.
Berkheya armata (Vahl) Druce 90553; 90554.
  rigida (Thunb.) Bolus & Wolley Dod 90555; 90556.
*Centaurea melitensis L. 90551; 90552.
Gerbera piloselloides (L.) Cass. 90547.
  crocea (L.) O.Kuntze 90548–90550.
*Cichorium intybus L. 90545.
*Hypochoeris radicata L. 90544.
  *glabra L. 90539–90543.
*Urospermum picroides F.W.Schmidt 90546.
*Sonchus asper Hill 90537; 90538.
  *oleraceus L. 90534–90536.